

CLAIMS

1.- Method of dividing a guided electromagnetic signal into two half-power signals using photonic crystals
5 characterized in that it is based on exciting a coupler made by disposing two parallel coupled cavity waveguides close to one another, implemented in photonic crystals, in which the two guides are physically separated and can be suitably curved to extract the two output signals, output
10 signals that cover the same physical path and so there is no delay between the two.

2.- Method of dividing a guided electromagnetic signal into two half-power signals using photonic crystals
15 according to Claim 1, characterized in that it is based on exciting the odd mode of the coupler obtaining at the output two signals with a 180° phase difference.

3.- Method of dividing a guided electromagnetic signal
20 into two half-power signals using photonic crystals according to Claim 1, characterized in that it is based on exciting the even mode of the coupler designed with greater bandwidth obtaining at the output two signals in phase.

25 4.- Method of dividing a guided electromagnetic signal into two half-power signals using photonic crystals according to Claims 1, 2 and 3, characterized in that it can use any type of 2D crystal.

30 5.- Method of dividing a guided electromagnetic signal into two half-power signals using photonic crystals according to Claims 1, 2 and 3, characterized in that it can use any type of 3D crystal.

35 6.- Method of dividing a guided electromagnetic signal into two half-power signals using photonic crystals according to Claims 1, 4 and 5, characterized in that it is

for application in a photonic crystal with a triangular network type.

7.- Method of dividing a guided electromagnetic
5 signal into two half-power signals using photonic crystals
according to Claims 1, 4 and 5, characterized in that it is
for application in a photonic crystal with a square network
type.

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